|   | Index of Claims   |          |          |               |                 |          |          |                |              |                   |           |           |           | Application No. |                        |                   |          |              |              |                 |   |             | Applicant(s) |             |          |         |              |          |                 |          |   |
|---|-------------------|----------|----------|---------------|-----------------|----------|----------|----------------|--------------|-------------------|-----------|-----------|-----------|-----------------|------------------------|-------------------|----------|--------------|--------------|-----------------|---|-------------|--------------|-------------|----------|---------|--------------|----------|-----------------|----------|---|
|   |                   |          |          |               |                 |          |          |                |              |                   |           |           |           |                 | 10/764 051             |                   |          |              |              |                 |   |             |              | HAYS ET AL. |          |         |              |          |                 |          |   |
|   |                   |          |          |               |                 |          |          |                |              |                   |           |           |           |                 | 10/764,051<br>Examiner |                   |          |              |              |                 |   |             |              | Art         |          |         |              |          |                 |          |   |
|   |                   |          |          |               |                 |          |          |                |              |                   |           |           |           |                 |                        |                   |          |              |              |                 |   |             |              | •           |          |         |              |          |                 |          |   |
|   | Ste               |          |          |               |                 |          |          |                |              |                   |           |           |           |                 |                        | Stephen J. Cherry |          |              |              |                 |   |             |              |             | 28       | 63      |              |          |                 |          |   |
|   |                   |          |          |               |                 |          | _        |                | _            | 1 "               |           |           |           |                 |                        |                   |          |              |              |                 |   |             |              |             |          |         |              |          | $\neg$          |          |   |
|   | √ Rejected    - ( |          |          |               |                 |          |          |                |              |                   |           |           | ıh nu     | ral)            | al) ·                  |                   | N        | Non-Elected  |              |                 | ĺ | A           | Appeal       |             |          |         |              |          |                 |          |   |
|   | -                 |          |          |               |                 |          |          |                | $\perp$      | ـــــ             | Cancell d |           |           |                 |                        |                   | +        |              |              |                 |   | $ \hat{a} $ |              |             |          |         |              |          |                 |          |   |
|   |                   |          | =        | Al            | llov            | vec      | <b>.</b> |                | ŀ            | ÷ F               |           |           | estricted |                 |                        |                   | 1        | Interference |              | се              |   | o           | Objected     |             |          |         |              |          |                 |          |   |
|   |                   |          |          |               |                 |          |          |                | L            |                   |           |           |           |                 |                        |                   | L        | _[_          |              |                 |   |             |              | Ш           |          |         |              |          |                 |          |   |
|   | Cla               | im       | Date     |               |                 |          |          |                |              |                   | Г         | Claim     |           |                 |                        | Date              |          |              | •            |                 |   | Claim       |              | Г           | Date     |         |              |          |                 |          |   |
|   |                   |          |          |               |                 | Ī        | T        |                | Τ            | П                 |           |           |           |                 |                        |                   |          |              |              | П               | Ī |             |              |             |          | "       |              |          |                 |          |   |
|   | Final             | Original |          |               | -               |          | -        |                |              |                   | Fig.      |           | Original  |                 |                        |                   |          | ı            | -            |                 |   | Final       | Original     |             |          |         |              |          |                 |          |   |
|   | "                 | ō        |          |               |                 |          |          |                |              |                   | "         |           | ŏ         |                 |                        |                   |          |              |              |                 |   | ۳           | ŏ            |             |          |         |              |          |                 |          |   |
|   |                   | 1        | Y        |               |                 |          |          |                |              |                   |           | 1         | 51        |                 |                        |                   |          | $\Box$       | 丄            |                 |   |             | 101          |             |          | $\perp$ |              |          |                 |          |   |
|   |                   | 3        | H        | $\perp$       | _               | +        |          | +              | +            | $\dashv$          | -         |           | 52<br>53  |                 | ╀                      | $\vdash$          | $\dashv$ | +            | +            | +               | - |             | 102<br>103   | $\vdash$    | +        |         | $\vdash$     |          |                 | +        |   |
|   |                   | 4        | Н        |               | +               | +        | $\dashv$ | -              | +            | +                 |           |           | 54        | +               | t                      | $\Box$            | 1        | +            | +            | +               | ł |             | 104          | Н           | 十        | +-      | +-           |          | +               | $\Box$   |   |
|   |                   | 5        | V        |               |                 |          | $\Box$   |                |              |                   |           |           | 55        |                 | L                      |                   |          |              | 1            |                 |   |             | 105          |             |          | $\Box$  |              |          |                 | П        |   |
|   |                   | 6<br>7   | 0        | $\rightarrow$ | $\dashv$        | 4        | 4        | -              | -            | -                 |           |           | 56<br>57  | +               | +                      | +                 |          | -+           | +            | +-              | - |             | 106<br>107   | $\vdash$    | -        | ╁       | ╀            | $\vdash$ | +               | +        |   |
|   |                   | 8        | ĭ        | $\dashv$      | $\dashv$        | $\dashv$ |          | +              | $\dagger$    |                   | -         |           | 58        | +               | +-                     |                   |          |              | 十            | $\top$          |   |             | 108          |             |          | 7       | <u> </u>     |          |                 |          |   |
|   |                   | 9        | Ш        |               |                 | $\Box$   |          | _              |              |                   |           |           | 59        | 1               |                        |                   |          |              |              |                 | Į |             | 109          |             |          |         |              |          | _               | $\perp$  |   |
|   |                   | 10<br>11 |          |               | $\dashv$        | $\dashv$ | $\dashv$ | -+             | +            | $\dashv$          | -         |           | 60<br>61  | +               | +-                     | +                 |          | +            |              | +               | ŀ |             | 110<br>111   | $\vdash$    | +        | +       | $\vdash$     | $\vdash$ | +               | +        |   |
|   | -                 | 12       | Н        |               |                 | 7        | $\dashv$ | $\dashv$       | 十            | $\dagger \dagger$ |           | T         | 62        | $\dagger$       |                        | $\Box$            |          | $\exists$    |              | $\top$          | ŀ |             | 112          |             | 1.       | 上       |              |          |                 |          |   |
| • |                   | 13       |          |               |                 |          | $\dashv$ |                | $\perp$      | $\Box$            |           |           | 63        | Ι               | L                      |                   |          | 4            | $\bot$       | $\Box$          |   |             | 113          |             | $\perp$  | _       |              |          | _               |          |   |
|   |                   | 14<br>15 | 0        |               | $\dashv$        | -        | +        | _              | +            | +-                | -         |           | 64<br>65  | +               | ╁                      | $\vdash$          | $\vdash$ | $\dashv$     | +            | +               |   |             | 114<br>115   | H           | +        | +-      | ╁            |          | +               | +        |   |
|   | -                 | 16       | 7        |               | $\dashv$        |          | +        | _              | +            | +                 |           | $\neg$    | 66        | +               | Ĺ                      |                   |          | ╛            |              |                 | Ì |             | 116          |             |          |         |              |          |                 |          |   |
|   |                   | 17       |          |               |                 |          |          | 4              | I            |                   |           |           | 67        |                 | lacksquare             |                   | Ц        | _            | _            |                 |   |             | 117<br>118   |             | _        | +       | -            |          | _               | +        |   |
|   |                   | 18<br>19 | ₩        | $\vdash$      | -+              | -        | +        | -              | +            | +                 | -         |           | 68<br>69  | +               | +                      | ╁                 |          | $\dashv$     | +            | +               | ŀ |             | 119          | H           | $\dashv$ | +       | +            | $\vdash$ | +               | +        |   |
|   |                   | 20       |          |               |                 |          |          |                |              |                   |           | T         | 70        |                 |                        |                   |          |              |              |                 |   |             | 120          |             | 1        |         |              |          |                 |          |   |
|   |                   | 21       |          | Ц             |                 |          | _        | _              |              |                   |           |           | 71        |                 | 1                      | <del> </del>      |          | _            | 4            | $\dashv$        |   |             | 121<br>122   | $\vdash$    | -        | ╁.      | +-           |          | +               | +-       |   |
|   |                   | 22       |          |               | $\dashv$        | $\dashv$ |          | +              | +-           | +                 | -         |           | 72<br>73  | +               | +                      |                   |          | -            | +            | ╁╌┤             |   |             | 123          | H           | $\dashv$ |         | $\dagger$    |          | -               | +        |   |
|   |                   | 24       | ō        |               |                 |          | 士        |                | 土            |                   |           |           | 74        |                 | T                      |                   |          |              |              |                 |   |             | 124          |             |          |         | 1            |          |                 |          |   |
|   | <u> </u>          | 25       | /        |               |                 |          | _        | _              | +            | $\perp$           | <u> </u>  | $\dashv$  | 75<br>76  | $\perp$         | -                      | ╀                 | Н        | _            | -            |                 |   |             | 125<br>126   |             |          | +-      | -            |          | -               | +-       |   |
|   |                   | 26<br>27 |          |               |                 | $\dashv$ | $\dashv$ | -              | +            | +                 | <u> </u>  | $\dashv$  | 77        | +               | +                      | +                 | -        | $\dashv$     | +            | $\dashv \dashv$ |   |             | 127          | $\vdash$    | _        |         | <u> </u>     |          |                 |          |   |
|   |                   | 28       |          |               |                 |          |          |                |              |                   |           | $\neg$    | 78        | $\perp$         | T                      |                   |          |              | $\Box$       |                 |   |             | 128          |             |          | $\perp$ | $oxed{\Box}$ |          |                 | ļ        |   |
|   | <u> </u>          | 29<br>30 | H        |               | $\dashv$        | -        | $\dashv$ | +              | +            | +                 | -         |           | 79<br>80  | +               | +                      | +                 | H        | $\dashv$     | -+           | +               |   |             | 129<br>130   |             | +        | +       | +            |          | $\vdash +$      | +-       |   |
|   |                   | 31       | ╁        |               | _               | +        | $\dashv$ | $\dashv$       | +            | +                 | -         | $\neg$    | 81        | $\vdash$        | t                      |                   |          |              | $\Box$       |                 |   |             | 131          |             |          | $\perp$ |              |          |                 |          |   |
|   |                   | 32       |          |               |                 |          |          |                | $\Box$       | $\Box$            |           |           | 82        | $\perp$         | L                      |                   |          | _            | _            |                 |   |             | 132          | $\vdash$    | 4        | _       | ┿            | <b>-</b> |                 | _        |   |
|   | -                 | 33<br>34 | $\vdash$ | -             |                 | _        |          |                | +            | +                 |           | +         | 83<br>84  | +-              |                        | +                 |          | $\dashv$     | +            | +               |   |             | 133<br>134   |             | +        | +       | +-           | $\vdash$ | $\vdash$        | +        |   |
|   | -                 | 35       | $\vdash$ | $\vdash$      |                 | -        |          | -              | $\top$       | $\vdash$          | -         | $\perp$   | 85        |                 | T                      |                   |          |              | 士            |                 |   |             | 135          |             |          |         |              |          |                 |          |   |
|   |                   | 36       |          |               |                 | $\Box$   |          |                | $\perp$      |                   |           | $\Box$    | 86        | 1_              | $\downarrow$           |                   |          | _            | _            |                 |   |             | 136          |             | $\dashv$ | +       | +-           | _        | $\vdash$        | <u> </u> |   |
|   |                   | 37<br>38 | _        | Н             | $\dashv$        | $\dashv$ | $\dashv$ | -              | ╬            | +                 | -         | +         | 87<br>88  | +               | ╀                      | +                 | H        |              | +            | +               |   |             | 137<br>138   |             | $\dashv$ | +       | +            | +-       | -               | +        |   |
|   |                   | 39       | t        | H             |                 | _        |          |                |              |                   |           | $\exists$ | 89        | 士               | $\pm$                  |                   |          |              | $\exists$    |                 |   |             | 139          |             |          | 士       |              |          |                 |          |   |
|   |                   | 40       |          |               | П               |          | $\Box$   | $\blacksquare$ | 1            | $\blacksquare$    |           | $\dashv$  | 90        |                 | T                      | 1                 | $\Box$   |              | $\dashv$     | $\perp$         |   |             | 140<br>141   | $\vdash$    | -        | $\perp$ | $\vdash$     | -        | $\vdash \vdash$ | +        |   |
|   | -                 | 41<br>42 | $\vdash$ | Н             | $\vdash \mid$   | $\dashv$ | $\dashv$ | +              | +            | +                 | -         | +         | 91<br>92  | +               | +                      | +-                | $\vdash$ | -            | $\dashv$     | +               |   |             | 141          |             | +        | +       | +            | $\vdash$ | $\vdash$        | +        | 1 |
|   |                   | 43       |          |               |                 |          |          | 士              |              |                   |           |           | 93        |                 | 1                      | 上                 |          |              | ightharpoons |                 |   |             | 143          |             |          |         |              |          |                 |          |   |
|   |                   | 44       | F        | Щ             | oxdot           | _]       | $\prod$  | $\perp$        | 4            | +                 | <u> </u>  |           | 94<br>95  | +               | +                      | +-                | $\vdash$ |              | $\dashv$     | +               |   | <u> </u>    | 144<br>145   |             | -        | +       | +-           | -        | $\vdash \vdash$ |          |   |
|   | $\vdash$          | 45<br>46 | $\vdash$ | $\vdash$      | $\vdash \vdash$ | $\dashv$ | $\dashv$ | $\dashv$       | +            | +                 | -         | $\dashv$  | 96        | +               | +                      | +                 | H        | $\dashv$     | +            | -               |   |             | 146          | 1           |          | +       | $\pm$        | İ        |                 | 1        | 1 |
|   |                   | 47       |          |               |                 | $\Box$   |          |                | $\downarrow$ | $\perp$           |           | $\Box$    | 97        |                 | T                      | _                 |          |              | $\Box$       | $\perp$         |   |             | 147          |             |          | $\bot$  | F            | -        |                 | F        | ] |
|   |                   | 40       | 1        |               |                 |          |          |                |              |                   |           |           | 00        | - 1             |                        |                   | , ,      |              |              |                 |   |             |              |             |          | - 1     |              |          |                 |          |   |